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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO.       |
|---|-------------|----------------------|-----------------------------|------------------------|
| 10/773,335  | 02/09/2004  | Jun-Seog Kim         | P56956                      | 8915                   |
| 7590<br>Robert E. Bushnell<br>Suite 300<br>1522 K Street, N. W.<br>Washington, DC 20005 |             | 07/18/2007           | EXAMINER<br>LE, DIEU MINH T |                        |
|   |             |                      | ART UNIT<br>2114            | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>07/18/2007     | DELIVERY MODE<br>PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/773,335

**Applicant(s)**

KIM, JUN-SEOG

**Examiner**

Dieu-Minh Le

**Art Unit**

2114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-11,13-20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,10,11,13-16,18-20 and 22 is/are rejected.
- 7) ☒ Claim(s) 9,17 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 2/9/04 & 11/2/06.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. This Office Action is response to the amendment filed on 04/04/07 in application 10/773,335.

2. Claims 1, 3-11, 13-20, and 22 are again presented for examination; claims 2, 12, 21 and 23 have been canceled.

**Claim Rejections - 35 USC § 101**

3. Claims 18 -19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As written, claims 18 -19 are drawn to a data structure per se; the limitations "a first field," "a second field," "a third field," "a fourth field," and other "subfields" are directed to nonfunctional descriptive material which although are claimed to be embodied on the computer-readable medium do not impart functionality when employed as a computer component. In other words, a claim needs to be directed to a practical application. A practical application is achieved when there is either a physical transformation or when a useful, concrete and tangible result is produced. An easily seen instance of such a result is a physical transformation performed by the process or machine claimed, so looking for a physical transformation as a result of the claimed subject matter is an efficient manner of passing this test. Claims 18 and 19 are drawn to a computer-readable medium having stored thereon a data structure comprising data fields and nonfunctional interrelationships between the fields and the medium. There is no physical transformation taking place nor is there a tangible result being produced. Hence, claims 18 and 19 failed the practical application and the tangible result tests. Thus, claims 18-19 do not contain patent eligible subject matter.

Furthermore, even if one is to say claims 18 and 19 are drawn to functional descriptive material which includes data structures. Then functional descriptive material must include data structures and computer programs which impart functionality

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when employed as a computer component to be statutory subject matter.

The definition of "data structure" from the 5th edition of the IEEE Standard Dictionary of Electrical and Electronics terms is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." Note that mere use of the term "data structure" does not mean a data structure is being claimed. The elements of the data structure must be evaluated to determine if, when taken as a whole, they constitute a data structure in accordance with the IEEE definition .

Functional descriptive material, per se, is not statutory. This is exemplified in In re Warmerdam 31 USPQ2d 1754 where the rejection of a claim to a disembodied data structure was affirmed. Thus a claim to a data structure, per se, or other functional descriptive material, including computer programs, per se, is not patent eligible subject matter which is the case in claims 18 and 19.

Functional descriptive material claimed in combination with an appropriate computer readable medium to enable the functionality to be realized is patent eligible subject matter if it is capable of producing a useful, concrete and tangible result when used in the computer system. Compare Warmerdam to In re Lowry 32 USPQ2d 1031 where a memory with a data structure that increased computing efficiency was patentable. Claims 18 and 19 are mere data structure, per se, which does not impart functionality when employed as a computer component nor is there a logical relationship among data elements nor is there a tangible result.

The computer readable medium must be physical structure which provides the functional descriptive material in usable form to permit the functionality to be realized with the computer to be patent eligible subject matter.

**Claim Rejections - 35 USC § 103**

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3-8, 10-11, 13-16, 18, 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinderman et al. (US. Pub. No. 2003/0204785 hereafter referred to as Kinderman) in view of Aggarwal (US. Pub. No. 20040088405).

As per claim 1:

Kinderman substantially teaches the invention. Kinderman teaches:

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- A method for supporting error cause of network management system configured by a Simple Network Management Protocol manager and a Simple Network Management Protocol agent (SNMP Master Agent) [col. 1, par. 0022] (i.e., error detection and correction) [abstract, col. 1, par. 0024 and col. 2, par. 0027]; the method comprising the steps of:
  - storing a numbered error cause in a database of the Simple Network Management Protocol manager database and a database of the Simple Network Management Protocol agent, respectively [col. 1, par. 0009];
  - when an error not defined by Simple Network Management Protocol error cause occurs [col. 2, par. 0036];
  - conducting a network management operation [col. 1, par. 0024; col. 2, par. 0026; col. 3, par. 0039].

Kinderman does not explicitly address:

- exchanging a message, having the error cause defined by Transaction Language 1 (TL1) between the Simple Network Management Protocol manager and the Simple Network Management Protocol agent....

However, Kinderman does disclose capability of:

- A method for error reporting, detecting, and correcting (EDAC) via SNMP manager/agent process [abstract, fig. 1, col. 1, par. 0003-0009] comprising:

- message responding to error status via routing transmission between SNMP manager and agent [col. 1, par. 0021-0022 and col. 2, par. 0026] defined by translation language or customization [col. 3, par. 0033].

In addition, Aggarwal explicitly teaches:

- A distributing queries and combining query response in a fault and performance monitoring system using distributed data gathering and storage via SNMP interface between SNMP manager and agent communication [abstract, col. 1, par. 0002; col. 5, par. 0079 and 0081] comprising:

- data communication exchange between the SNMP manager and agent in supporting the error detection, monitoring, and processing [col. 7, par. 0212-0234] including a) generating a query associated with the performance; b) disseminating the query to at least two of the data gathering elements; c) accepting query responses from each of the at least two data gathering elements; d) combining information from the accepted query responses to generate system performance

information; and e) generating a report using the system performance information [col. 15, claim 1].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention to first realizing Kinderman's message responding to error status via routing transmission between SNMP manager and agent defined by translation language or customization as being the exchanging a message, having the error cause defined by Transaction Language 1 (TL1) between the Simple Network Management Protocol manager and the Simple Network Management Protocol agent... as claimed by Applicant. This is because Kinderman's error detection and correction capability in SNMP explicitly performed data/error monitoring, detecting, executing, analyzing via its SNMP manager and agent communication/transmission processes. By utilizing these capabilities, the network processing within the computing network management system, more specifically the data SNMP, can be selected and/or configured properly via its data fetching, executing, and storing, based upon its error condition response and determination in supporting the EDAC operation; second, by applying the data communication exchange between the SNMP manager and agent in supporting the error detection, monitoring,



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and processing including a) generating a query associated with the performance; b) disseminating the query to at least two of the data gathering elements; c) accepting query responses from each of the at least two data gathering elements; d) combining information from the accepted query responses to generate system performance information; and e) generating a report using the system performance information as taught by Aggarwal in conjunction with the method for error reporting, detecting, and correcting (EDAC) via SNMP manager/agent process as taught by Kinderman, the SNMP system within the network computing management system can enhance its operation performance, more specifically to ensuring the error detected, corrected, in proper and efficient manner via its error analysis and data exchanging or communication processes between the SNMP manager and agent.

This modification would have been obvious because a person having ordinary skill in the art would have been motivated to do so to improve the SNMP computing system operation availability and network/system performance therein with a mechanism to enhance the data memory access, data debugging, data reliability, and data throughput which eventually will increase its performance, such as data throughput between internal and external devices.

As per claims 3-5:

Kinderman further teaches:

- numbering an error cause defined by the selected interface [col. 1, par. 0006 and col. 2, par. 0031];
- error causes are numbered by categorizing the kinds of error and sub-categorizing [col. 1, par. 0009].

Kinderman does not explicitly address:

- error objects and kinds of error causes are numbered at 200 interval.

However, Kinderman does disclose capability of:

- A method for error reporting, detecting, and correcting (EDAC) via SNMP manager/agent process [abstract, fig. 1, col. 1, par. 0003-0009] comprising:
  - message responding to error status via routing transmission between SNMP manager and agent [col. 1, par. 0021-0022 and col. 2, par. 0026] via a lookup database process [col. 3, par. 0042] including 500 additional error messages stored [col. 2, par. 0032].

In addition, Aggarwal explicitly teaches:

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- A distributing queries and combining query response in a fault and performance monitoring system using distributed data gathering and storage via SNMP interface between SNMP manager and agent communication [abstract, col. 1, par. 0002; col. 5, par. 0079 and 0081] comprising:

- *data communication exchange between the SNMP manager and agent in supporting the error detection, monitoring, and processing* [col. 10, lines 50 through col. 11, lines 2 and col. 12, lines 50 through col. 13, lines 2] utilizing the object oriented process within the management information base (MIB) [col. 2, par. 0023 and col. 5, par. 0081].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention to first realizing Kinderman's *message responding to error status via routing transmission between SNMP manager and agent* via a lookup database process as being the error objects and kinds of error causes are numbered at 200 interval as claimed by Applicant. This is because Kinderman's error detection and correction capability in SNMP explicitly used the object code or object functionality to deal with error numbering and data/error monitoring, detecting, executing, analyzing via its SNMP manager and agent communication/transmission processes; second, by

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applying the data communication exchange between the SNMP manager and agent in supporting the error detection, monitoring, and processing utilizing the object oriented process within the management information base (MIB) as taught by Aggarwal in conjunction with the method for error reporting, detecting, and correcting (EDAC) via SNMP manager/agent process as taught by Kinderman, the SNMP system within the network computing management system can enhance its operation performance between the SNMP manager and agent for the same reasons set forth as described in claim 1, *supra*.

As per claims 6-8:

Kinderman further teaches:

- the error cause stored in the databases is interpreted based on an error status corresponding to a number given by an error analysis application that is installed in the Simple Network Management Protocol agent and the Simple Network Management Protocol manager (i.e., error detection and correction) [col. 1, par. 0024 and col. 2, par. 0027, 0031, and 0036];
- the error cause stored in the databases is represented by a number in an Err-Status field of Simple Network Management Protocol (SNMP) Protocol Data Unit, in

accordance with the kind of an error [col. 1, par. 0006 and col. 2, par. 0031];

Kinderman does not explicitly address:

- the error cause defined by Transaction Language 1 (TL1) ...

However, Kinderman does disclose capability of:

- A method for error reporting, detecting, and correcting (EDAC) via SNMP manager/agent process [abstract, fig. 1, col. 1, par. 0003-0009] comprising:

- message responding to error status via routing transmission between SNMP manager and agent [col. 1, par. 0021-0022 and col. 2, par. 0026] defined by translation language or customization [col. 3, par. 0033].

In addition, Aggarwal explicitly teaches:

- A distributing queries and combining query response in a fault and performance monitoring system using distributed data gathering and storage via SNMP interface between SNMP manager and agent communication [abstract, col. 1, par. 0002; col. 5, par. 0079 and 0081] comprising:

- data communication exchange between the SNMP manager and agent in supporting the error detection, monitoring, and

processing [col. 7, par. 0212-0234] including a) generating a query associated with the performance; b) disseminating the query to at least two of the data gathering elements; c) accepting query responses from each of the at least two data gathering elements; d) combining information from the accepted query responses to generate system performance information; and e) generating a report using the system performance information [col. 15, claim 1].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention to first realizing Kinderman's message responding to error status via routing transmission between SNMP manager and agent defined by translation language or customization as being the exchanging a message, having the error cause defined by Transaction Language 1 (TL1) between the Simple Network Management Protocol manager and the Simple Network Management Protocol agent... as claimed by Applicant. This is because Kinderman's error detection and correction capability in SNMP explicitly performed data/error monitoring, detecting, executing, analyzing via its SNMP manager and agent communication/transmission processes. By utilizing these capabilities, the network processing within the computing

network management system, more specifically the data SNMP, can be selected and/or configured properly via its data fetching, executing, and storing, based upon its error condition response and determination in supporting the EDAC operation; second, by applying the data communication exchange between the SNMP manager and agent in supporting the error detection, monitoring, and processing including a) generating a query associated with the performance; b) disseminating the query to at least two of the data gathering elements; c) accepting query responses from each of the at least two data gathering elements; d) combining information from the accepted query responses to generate system performance information; and e) generating a report using the system performance information as taught by Aggarwal in conjunction with the method for error reporting, detecting, and correcting (EDAC) via SNMP manager/agent process as taught by Kinderman, the SNMP system within the network computing management system can enhance its operation performance, more specifically to ensuring the error detected, corrected, in proper and efficient manner via its error analysis and data exchanging or communication processes between the SNMP manager and agent for the same reasons set forth as described in claim 1, supra.

As per claim 10:

This claim is similar to claim 1. The only minor different is that claim 10 introduce "a SNMP manager/agent mounted with a database" within an apparatus for supporting error cause of network management system instead of a method for supporting error cause of network management system as described in claim 1. However, Aggarwal explicitly disclosed data communication exchange between the SNMP manager and agent in supporting the error detection, monitoring, and processing [col. 10, lines 50 through col. 11, lines 2 and col. 12, lines 50 through col. 13, lines 2] utilizing the object oriented process within the management information base (MIB) [col. 2, par. 0023 and col. 5, par. 0081] in combining with Kindeman's *message responding to error status via routing transmission between SNMP manager and agent* [col. 1, par. 0021-0022 and col. 2, par. 0026] via a lookup database process (i.e., SNMP manager/agent mounted with a database) [col. 3, par. 0042]; Therefore, this claim is also rejected under the same rationale applied against claim 1. In addition, all of the limitations have been noted in the rejection as per claim 1.

As per claims 11, 13-16:



These claims are the same as per claims 1, 3-8. The only minor different is that these claims are directed to a **computer-readable medium having computer-executable instruction for performing a method** instead of the method for supporting error cause of network management system as described in claims 1, 3-8, respectively. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to realize that a **computer-readable medium** is a necessary item for such computer network management networking system, more specifically, SNMP transmission between manager and agent. Since the SNMP manager and agent obviously needs a means for instruction or code means resided within the machine-readable storage medium for performing the data storing, receiving, transmitting operation via the MIB functionality. Therefore, these claims are also rejected under the same rationale applied against claims 1, 3-8.

As per claim 18:

This claim is the same as per claim 1, 3-8. The only minor different is that this claim is directed to a **computer-readable medium having stored data structure** instead of the method for supporting error cause of network management system as described in claims 1, 3-8, respectively. However, it would have been

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obvious to one having ordinary skill in the art at the time the invention was made to realize that a **computer-readable medium** is a necessary item for such computer network management networking system, more specifically, SNMP transmission between manager and agent. Since the SNMP manager and agent obviously needs a means for instruction or code means resided within the machine-readable storage medium for performing the data storing, receiving, transmitting operation via the MIB functionality. Therefore, this claim is also rejected under the same rationale applied against claims 1, 3-8.

As per claims 20 and 22:

These claims are similar to claims 1, 3-8. The only minor different is that these claims introduce "a first protocol" within method instead of a method for supporting error cause of network management system as described in claims 1, 3-8.

However, Kindeman's **message responding to error status via routing transmission between SNMP manager and agent** [col. 1, par. 0021-0022 and col. 2, par. 0026] via a multi-protocol architecture capability [col. 1, par. 0022 and col. 2, par. 0028] including SNMP protocol rules [col. 3, par. 0037];

Therefore, these claims are also rejected under the same rationale applied against claims 1, 3-8. **In addition, all of the**

limitations have been noted in the rejection as per claims 1, 3-8.

**Allowable Subject Matter**

6. Claims 9, 17, and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, claim 19 is still subject to the 101 rejection discussed in paragraph above.

**Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. A shortened statutory period for response to this action is set to expired THREE (3) months, ZERO days from the date of this letter. Failure to respond within the period for response will cause the application to be abandoned. 35 U.S.C. 133.

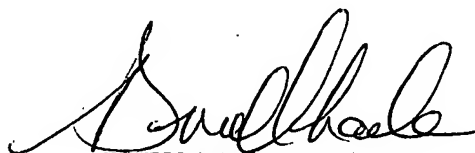
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dieu-Minh Le whose telephone number is (571) 272-3660. The examiner can

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normally be reached on Monday - Thursday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571)272-3644. The Tech Center 2100 phone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**DIEU-MINH THAI LE  
PRIMARY EXAMINER  
ART UNIT 2114**

DML  
07/06/07